28. (currently amended) A peer-vector machine, comprising:

a host processor operable to execute an ~~program~~ instruction of a program, ~~and, in~~ to generate host data in response to the ~~program~~ instruction, and ~~operable~~ to identify configuration information that is separate from the program~~generate first host data~~; and

a pipeline accelerator coupled to the host processor and operable to

receive the identified configuration information,

configure a portion of the pipeline accelerator in response to the configuration information,

receive the ~~first~~ host data, and

generate ~~first~~ pipeline data from the ~~first~~ host data without responding to any program instruction.

29. (currently amended) A peer-vector machine, comprising:

a pipeline accelerator operable to

receive host data, and

generate pipeline data from the host data without receiving any program instruction; and

a host processor coupled to the pipeline accelerator and operable to execute a program ~~instruction~~, ~~and, in response to the program instruction,~~ operable to generate the ~~first~~ host data in response to the executing program, and, while not executing the program, operable to configure a portion of the pipeline accelerator to generate the pipeline data~~, and~~

~~a pipeline accelerator coupled to the host processor and operable to~~

~~receive the first host data, and~~

~~generate first pipeline data from the first host data without receiving any program instruction~~.

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30. (new) The peer-vector machine of claim 1 wherein the pipeline accelerator is operable to configure the portion of the pipeline accelerator before generating the first pipeline data.